

REMARKS

THE ALLOWED CLAIMS

Claims 5 and 6-9 were acknowledged to contain allowable subject matter.

Claim 5 has been amended to overcome the 35 U.S.C. § 112, second paragraph rejection.

Claims 3 and 10-19 are hereby cancelled without prejudice or disclaimer to expedite prosecution.

Claim 4 has been amended to depend from allowable claim 5.

IN THE DRAWINGS

A formal drawing incorporating the approved amendment of Figure 7 to expressly designating the first die hole land portion and tapered portion has been ordered and will be provided in due course.

THE 35 U.S.C. § 112 REJECTIONS

The 35 U.S.C. § 112 rejections are overcome by the cancellation of claims 3 and 10-15 and by the amendment to claim 5. Reconsideration and withdrawal are requested.

THE 35 U.S.C. § 103 REJECTIONS

The 35 U.S.C. § 103 rejection of claims 3-4 and 10-19 are overcome by the cancellation of claims 3 and 10-19 and by the amendment of claim 4 to depend from claim 5. Withdrawal is requested.

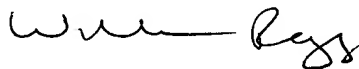
Accordingly, allowance of new claims 14-19 is respectfully solicited.

Attached hereto is a marked-up version of the changes made to the claims and to the amendment. The attached page is captioned VERSION WITH MARKINGS TO SHOW CHANGES MADE.

To the extent necessary, a petition for an extension of time under 37 C.F.R. 1.136 is hereby made. Please charge any shortage in fees due in connection with the filing of this paper, including extension of time fees, to Deposit Account 500417 and please credit any excess fees to such deposit account.

Respectfully submitted,

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VERSION WITH MARKINGS TO SHOW CHANGES MADEIN THE CLAIMS:

Please amend the claims as follows:

4. An optical fiber coating apparatus according to claim [3] 5, wherein said protrusion is shaped like a circular truncated cone.

5. An optical fiber coating apparatus for applying first and second coating resins as a laminate to the outer periphery of an optical fiber, said apparatus comprising:

a first coating die having a first die hole through which said optical fiber is inserted and a basically disk-shaped lower end face with a protrusion projecting in the passing direction of said optical fiber and formed around said first die hole, said first die hole and the outer periphery of said optical fiber therein forming a space therebetween into which said first coating resin is injected; and

a second coating die having a second die hole which is concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a circular plate opposing the lower end face of said first coating die so as to form a gap through which said second coating resin is injected into a space formed between said second die hole and the outer periphery of said optical fiber therein;

said protrusion being formed so as to reduce an annular lower-pressure region formed around said optical fiber in a flow of said second coating resin within said gap; and said protrusion is shaped like a circular truncated cone, wherein said apparatus satisfies:

$$0.05G < H < 0.5G$$

$$(D_2 - D_1)/2 < W < G$$

$$0.01 \text{ mm} \leq L < W$$

where H is the height of the circular truncated cone of said protrusion, W is the distance between the outer periphery of the bottom portion of said circular truncated cone and the inner peripheral face of said first die hole, L is the distance between the outer periphery of [the] a head portion of said circular truncated cone and the inner peripheral face of said first die hole, D_1 is the inner peripheral face diameter of said first die hole on the outlet side of said optical fiber, D_2 is the inner peripheral face diameter of said second die hole on the inlet side of said optical fiber, and G is the distance of the gap between said first and second coating dies.

6. An optical fiber coating apparatus according to claim 5, further [for applying first and second coating resins as a laminate to the outer periphery of an optical fiber, said apparatus] comprising:

[a first coating die having a first die hole through which said optical fiber is inserted and a basically disk-shaped lower end face with a protrusion projecting in the passing direction of said optical fiber and formed around said first die hole, said first die hole and the outer periphery of said optical fiber therein forming a space therebetween into which said first coating resin is injected;

a second coating die having a second die hole which is concentric with said first die hole and through which said optical fiber passed through said first die hole is inserted and an upper end face comprising a circular plate opposing the lower end face of said first coating die so as to form a gap through which said second coating resin is injected into a space formed between said second die hole and the outer periphery of said optical fiber therein; and]

a positioning member having a cylindrical inner peripheral face adapted to fit the respective outer peripheral faces of said first and second coating dies,

each of said first and second coating dies and the inner peripheral face of said positioning member being constituted by a material having a Young's modulus of 5×10^4 kg/mm² or greater and a coefficient of thermal expansion of $6 \times 10^{-6}/^{\circ}\text{C}$ or lower[,

said protrusion being formed so as to reduce an annular lower-pressure region formed around said optical fiber in a flow of said second coating resin within said gap

and wherein said apparatus satisfies:

$$0.05G < H < 0.5G$$

wherein H is the height of said protrusion, and G is the distance of the gap between said first and second coating dies].

7. An optical fiber coating apparatus according to claim [6] 5, further wherein said positioning member is constituted by an inner periphery member made of cemented carbide forming said inner peripheral face and an outer periphery member made of alloy tool steel having a lower Young's modulus and a higher coefficient of thermal expansion than said inner periphery member which are fastened and secured together by interference fitting.
8. An optical fiber coating apparatus according to claim [6] 5, further wherein a bottom face of said first or second die has a tap used for attachment/detachment with respect to said positioning member.
9. An optical fiber coating apparatus according to claim [6] 5, further comprising a nipple made of a material having a Young's modulus, a coefficient of thermal expansion, and a hardness which are substantially identical to those of the inner peripheral face of said positioning member, said nipple being adapted to fit the inner peripheral face of said positioning member such that a nipple hole for guiding the inserted optical fiber to said first die hole is arranged concentric with said first die hole.

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